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25 January 1979

MEMORANDUM

Comments on Navy Review
Of Revised OSR SLOC Paper*

1. *What is the basis for our assumption that the level of economic shipping would continue at essentially peacetime levels during the first months of war? (Navy para. 1)*

US planning appears to assume that economic shipping would continue in wartime, but at a reduced level (see fn., p. 22, Secret version of SLOC paper). Secretary Claytor has estimated that "it could take 6,000 ships, each making a round trip every 30 days,...in order to carry out the resupply of forces in Europe."** Present planning in DoD appears to call for monthly sailings of no more than about 1,000 ships with military cargoes. We presume that the remainder of the ships would be loaded with economic cargoes. Because of such statements by authoritative Navy spokesmen and studies, such as one by [redacted] in 1973,*** we thought everyone believed that a significant level of

* Our comments on the Navy review are at the [redacted] level because we wanted to be quite specific in citing the sources for our interpretation of Soviet naval doctrine and practice. Nonetheless, the secret classification on the revised version of the study is both accurate and appropriate.

** See the Secretary's Dearborn address of 12 September 1978. Other information, informally received from Adm. Kidd's staff, indicates that 3,000 shipments might be closer to the mark. We used the smaller figure in our paper.

*** SACLANT [redacted] 22 Aug 73. This study estimates that the essential quantity of economical shipping was at 54 percent of peacetime levels. The study further identified 11,000 ships as suitable for sealift.

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economic shipping would be maintained throughout a conflict. Navy studies [redacted] assumed the continuation and destruction of economic shipping. [redacted]

2. *Why did we use Lloyd's Register of Shipping as our source of information on the total number of NATO-flag ships over 6,000 tons? (para. 2)*

There is a disagreement on the number of ships that would be available (see fn, p. 21). We used the Lloyd's figure because it is a documentary source of information on real ships. In any event, whether one uses the Lloyd's data or those of JCS [redacted] seems immaterial; all the figures show that NATO has a large pool of merchant ships with which to replace shipping losses. What could not be replaced as easily would be military cargoes. [redacted]

3. *What are the assumptions underlying the 800 figure in the JCS plan? Are they especially earmarked? Is the figure current? (para. 2)*

According to OSD/PA&E, JCS, [redacted] we have more lift capability than we can use. As of last fall, a pool consisting of 400 US and 600 European NATO ships had been established, and arrangements were being made for them to begin carrying military supplies and equipment within a week or so of M-day. These ships, in any case, would be a small portion of those available. The JCS Posture Statement for FY 1979 (p. 100), for example, states that "...NATO merchant shipping is expected to meet anticipated requirements." It identifies 4,000 NATO-flag ships of the dry bulk type that could be used for reinforcement and indicates that selected US-controlled flag of convenience ships also would be used if needed. Adm. Kidd has stated that, including some flag of convenience ships, NATO has 10,000 merchantmen of 1,600 tons or more. Of these, he estimated that some 6,000 would be needed.* [redacted]

* See, for example, New York Times, 6 June 1978.

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4. Are we aware of any of these "detailed analyses" done by Navy indicating that all US ASW resources are needed to keep US military ship losses at "acceptable levels?" If so, what appears to account for the different results? Area of conflict? Definition of Soviet air and subsurface forces? Assumptions about weapon loading and tactics? (para. 3)

Navy-commissioned studies

are flawed, in our view of their analysis of protective requirements, because they generally have assumed that:

- Nearly all of the USSR's general purpose submarine force would be committed against merchant shipping, ignoring NATO naval forces, and the likelihood that a large number of submarines would not be deployable because of range constraints, their repair status, or basing in inland seas.
- Soviet submarines would be re-supplied out of area.
- Torpedo loadings on Soviet submarines were overall exaggerated by some 40 percent.

A more recent Navy study uses the revised torpedo capacities and is therefore more consistent with our own findings.

5. What is the source of our assumption about the make-up of convoys carrying military cargoes? If convoys carrying military cargoes had exclusively military content, could they be continuously tracked and distinguished from non-military convoys through the use of RORSAT and EORSAT? (para. 5)

US strategic mobility studies appear to assume that some economic support shipping would take place concurrently with the more important military shipments. Running military convoys exclusively would,

-3-

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of course, simplify the discrimination problem for the Soviets.

To reduce convoy vulnerability, the United States, it seems to us, has several options, including mixing economic cargoes within ships and within convoys and sending some high-value cargoes independently in fast ships at maximum speed. Our study did not examine US options but merely assumed that the US randomized (or better) losses of military cargoes.

6. What are our "assumptions" about the torpedo loads of Soviet long-range attack submarines? To what extent would we expect them to be different if SLOC interdiction were a principal objective? (paras. 6 and 7)

There is good evidence that carrying mixed torpedo loads is standard practice on Soviet attack submarines. They could, however, optimize their loadings for specific missions. We assumed they did in our use of the model.

We strongly disagree with Navy's comment that torpedo loadings would not constrain the Soviets' anti-SLOC capabilities. The submarine classes cited, plus the Z-class, constitute less than half of the USSR's active inventory of general purpose submarines. The new loadings indicate that Soviet cruise missile submarines, such as the J-class, have little capability for interdiction as a secondary mission. The net effect for the entire long-range attack submarine force is by itself a reduction in capability by some 40 percent from that used in all but one of the Navy studies we are aware of, and that, we believe is significant.

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Although it seems irrelevant to compare US and Soviet torpedo loadings in an analysis of Soviet anti-SLOC capability, we note that the loadings attributed to US submarines appear to be incorrect.

7. *What information do we have about Soviet doctrine and/or capabilities to depart from the practice of carrying mixed loads of torpedoes? (paras. 6 and 7)*

We have no information that the Soviets plan to change their practice of mixing torpedo loads--ASW and anti-shipping weapons--but they have the capability to switch most of their capacity to antiship torpedoes.

8. *What comments do you have on the comparison of Soviet attack submarines today with German submarines of World War II? (paras. 6 and 7)*

Modern submarines obviously would be much more capable than the common German Type VIIc U-boat of World War II would be now, but the comparison is unfair and may be irrelevant. In the early and successful years of World War II, the Germans operated almost entirely on the surface, were fairly close to the target areas, or were able to replenish out of area. Moreover, they generally had a speed advantage over the targets of that day. Soviet diesel submarines have none of these advantages. It is instructive to note that with improvements in Allied radar technology, the development of the Leigh light, and nearly continuous air cover, German effectiveness plummeted after July 1942 to only 1.7 merchant ships destroyed per submarine lost.

*NAVSHIPS, 0900-0574010(Change 52), May 1974.

-5-

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9. *What is your view of the Navy's interpretation of Soviet writings concerning interdiction of SLOCs?*

In their review, the Navy singled out five Soviets whose writings, they believe, affirm the importance of SLOC interdiction. We agree that three of these men--Gorshkov, Stalbo, and V'yunenko--are authoritative spokesmen for Soviet naval policy, but we disagree that their writings indicate that the Soviets plan on conducting a major at-sea interdiction campaign in a war with NATO.

It seems to us that a study of Rear Adm. (he has been promoted) V'yunenko's writings leads to the opposite conclusion. His writings consistently stress the primacy of destroying Western submarines and aircraft carriers as soon as possible after war begins. If unable to do so before these forces launch their weapons, they still must be destroyed in order to forestall subsequent attacks.

According to V'yunenko, during a conventional war, "each side will try to weaken as much as possible enemy forces carrying nuclear weapons, especially strategic ones." He characterized SSBNs as the "most important objective that navies must defend" and urged that

Anything capable of waging direct combat against enemy submarine missile carriers must be dispatched into the areas of their combat patrol in order to destroy these extremely important nuclear means of the enemy. ...[SSBNs] constitute the main nuclear threat from naval axes...[and require] that the basic naval effort be concentrated against them.

-6-

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In sum, V'yunenko believes that the anti-SSBN mission "has today become the most important in naval warfare ...[and] predetermines the course of future naval warfare and naval research and development." It transcends navies' capabilities.* As part of their anti-SSBN effort, the Soviets would destroy the shore navigation and communication facilities that support Western SSBNs and would combat NATO ships that were preventing Soviet ASW forces from searching for enemy submarines.**

While seeking out Western SSBNs, the Soviets must also protect their own, both in transit and in their "waiting areas." Soviet operations in support of their own SSBNs also would require that they combat Western ASW forces, described as "a most important" class of targets which pose a serious threat to Soviet SSBNs and against which the Soviets would expend a "maximum effort." Concern for the security of Soviet SSBNs probably contributed to V'yunenko's statement in 1975 that destruction of Western SSNs is second in priority only to countering enemy SSBNs.***

"Simultaneously" with these priority tasks that must be performed in the conventional phase, the Soviet Navy also would have to fulfill others, such as troop protection, interdiction, and conducting amphibious landings. The purpose of these interdiction operations mainly would be "to break up enemy troop movements" rather than to stem the flow of materiel across the Atlantic.

V'yunenko's approach to interdiction is similar to that of Gorshkov: it is subsumed in the navy's growing strategic strike capability.

* *Military Thought*, No.1, 1975, C/NFD. A month earlier Gorshkov had written in *Morskoy Sbornik* that the ever-growing scope of war at sea required additional involvement of other services in naval missions.

*** *Military Thought*, No. 1, 1975,

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All technical policy of...major sea powers and the direction of the development of the art of naval warfare today are subordinated to the goal of increasing capabilities 'against the shore'...In the recent past [anti-SLOC] activities constituted navies' principal business, while today they have become only one component, and far from the most important one, of the mission of damaging the military economic potential of a number of naval powers.*

V'yunenko probably also would approve the navy's conducting other types of interdiction as well, if these operations did not compete with strategic ones. His historical writings, like those of Gorshkov, have emphasized the value of attacking merchant ships on the high seas as a means of tying down a disproportionate number of enemy naval forces.** He regards in-area interdiction of NATO's sea communications as an integral part of the navy's traditional--and formerly most important--role of supporting the ground forces.*** And in an interdiction context, he indicates that action "against new potential sources of military might...[to disrupt] gas and oil production on the continental shelf" could become increasingly important.****

But the Soviets could not simultaneously accomplish --any more than we could--all of the tasks deemed important, and V'yunenko's priorities are clear.

- * Military Thought, No. 1, 1977, *Emphasis not in original*
 ** Morskoy Sbornik, No. 1, 1975,
 *** Military Thought, No. 7, 1963; Ibid., No. 3, 1968,
 **** Ibid., No. 3, 1978,

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Stalbo's writings also fail to support the Navy's contention that interdiction is an important mission of the Soviet Navy. Like V'yunenکو, he stresses the importance of destroying the enemy nuclear fleet before weapon launch and considers destruction of "even a few [SSBNs] an event of strategic importance."* Foreshadowing Gorshkov, in a journal article in 1969 he wrote that the development of nuclear weapons had led to changes in traditional naval missions, with the result that modern navies have been "transformed into strike forces, oriented primarily against land targets."** One of the affected "traditional missions" was interdiction at sea: "Oceans have lost some of their former importance," he wrote in 1971, "as an arena for battle along sea communications."*** And in the final chapter of the book, History of Naval Art (1969), Stalbo explained why interdiction at sea was no longer so relevant:

A diminution in the importance of combat on ocean lines of communication is one of the natural developments of nuclear-missile war. As a result of the use of nuclear weapons against ground targets, enemy losses can turn out to be several times larger than losses from the most successful operations against his shipping. In addition, the pace at which events unfold during the interdiction of communications does not at all correspond to the pace at which events unfold during an exchange of nuclear strikes against territories for the purpose of destroying his military-economic potential. Finally, the devastation that will be caused by mass use of nuclear weapons...will sharply reduce all spheres of consumption....****

- * Military Thought, No. 4, 1977,
- ** Morskoy Sbornik, No. 12, 1969,
- *** Military Thought, No. 3, 1971,
- **** S.Ye. Zakharov (ed.), History of Naval Art (Moscow: Voenizdat, 1969), p. 540. Stalbo wrote the last two chapters.

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Gorshkov has written extensively on interdiction, but nowhere, to our knowledge, has he indicated that interdiction at sea is as important as the navy's strategic offensive and defensive tasks. Many of these writings have appeared in a historical context. They indict Germany in World War II for not supporting its U-boats with other forces, "especially aviation which could have operated not only against ships but also against ports, industry, and accumulated stores"; for not "conducting a single operation" against Western ASW forces; and for being ill-prepared (the Soviets estimate that the Germans would have needed at least 1,000 submarines). He concludes that under conditions of continental warfare "operations against ocean communications...were only of secondary, local significance for the opposing sides."* Because of the disparity in effort required for the Allies to counter the U-boats, however, he probably would regard the German campaign as having been at least partially successful.

When he has listed the missions of the modern Soviet Navy, Gorshkov has placed interdiction in last place twice** and on one occasion third, behind strategic offensive and anti-fleet operations, but ahead of support for the ground forces, conducting amphibious operations and other traditional naval tasks.*** Even this latter appearance of upgrading the interdiction mission is doubtful because, in discussing the tasks to be performed by specific

* See Morskoy Sbornik, No. 11, 1972, U. US success against Japanese maritime communications, were discounted because of the "ineptitude" of the Japanese and further were characterized as indecisive.

** See Large Soviet Encyclopedia (1971) and the pamphlet Navy (Moscow: Znaniye Publishing House, 1977). Navy was written to mark the 60th anniversary of the Soviet Armed Forces.

*** Soviet Military Encyclopedia (1976). This article also lists surface ships first among the branches of the Soviet Navy and then, two sentences later, states that the "main branches" are submarines and naval aviation.

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platforms, he listed interdiction as the last task to be performed by aircraft and "modern" submarines and made no mention of it for surface ships. (The missions of older diesel-powered submarines, which might be expected to have a more important anti-SLOC role, were not mentioned.)*

The Soviets are well aware of NATO's concern for the security of its shipping, and Gorshkov, particularly in his early statements on interdiction, has sought to exploit that concern. Writing in Pravda on 29 July 1961, for example, he warned the West "to stop and think of [its]...greatly extended communications lines..." before undertaking new military "adventures." In 1967 he explained to readers of Morskoy Sbornik that exploiting Soviet capability to disrupt Western shipping was necessary "to curb the aggressive nature of the imperialists." He followed this up by writing in a historical context that the threat of interdiction is a peacetime use of naval power.**

Gorshkov's subsequent writings indicate that he believes a shift has occurred in the manner in which future SLOC campaigns would be conducted and suggests that sinking merchant ships at sea is not a major task of the Soviet Navy today.

In the 28 July 1974 issue of Pravda, Gorshkov wrote that "the navy always has had two main tasks...combat against the enemy fleet and operations against the shore." He separated out strategic defense from anti-fleet operations as, apparently, the obverse of attacking shore targets. Defense against seaward attack, he wrote, is growing increasingly important because the main task of navies now is to attack land targets. And, with the development of nuclear weapons, such attacks are growing in importance.

* Ibid.

** Morskoy Sbornik, No. 2, 1972: U.

-11-

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Gorshkov considerably expanded his treatment of naval missions in his book, Sea Power of the State, published in 1976. He wrote that:

- The introduction of nuclear weapons has expanded the scope of employing naval operations against the shore.
- Anti-shore operations now dominate naval warfare and naval research.
- As confirmation of this trend, he observed that SSBNs alone among US naval forces are designated "strategic."
- The navy's new [nuclear strike] capability against the shore and the "enormous threat from seaward" determine the character of modern naval operations, the most important of which is strategic defense. (Indeed, strategic ASW is defined as now being a national, rather than merely a naval mission.)
- Under the new conditions of nuclear weapons, the navy's battle against the enemy's [general purpose] fleet has become secondary to operations against the shore.

Gorshkov summarized his discussion of the impact of the development of nuclear weapons by saying:

-12-

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Operations entailing the disruption ...of the enemy's sea shipping, which formerly were directly related to the sphere of employing a fleet against the enemy's fleet, today are taking a new direction. By being included in the overall system of naval operations against the shore, they are strengthening the attributes of the Navy which it has acquired due to its modern hardware--the capability to carry out strategic missions of an offensive nature through direct action against the source of the military strength of the enemy.*

Thus, Gorshkov clearly believes that the "traditional" method of interdicting seaborne commerce by torpedoing merchant ships at sea has changed in favor of "modern" SLBM strikes against the ports and other sources of supply.

Marshal Sokolovskiy, on the other hand, believed that interdiction and other tasks conducted in support of the ground forces were among the most important that the navy must fulfill. But even for Sokolovskiy, attacking ships at sea was secondary to attacking ground targets:

Operations against enemy communications should be conducted on a large scale from the very beginning of war. This can be accomplished by delivery of strikes by the Strategic Rocket Forces and nuclear submarines against naval bases, canals, narrow straits, and ship building and ship repair yards, and also by destruction of convoys and transports at sea by submarines and aircraft.*

* *Emphasis not in original.*

-13-

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Moreover, the efficacy of Sokolovskiy as a spokesman on naval policy is questionable. Military Strategy, a book published in three editions during the 1960s by a collegium of ground force officers led by Sokolovskiy, angered Soviet naval officers by snubbing the navy's role in World Wars I and II; by insisting that, in future wars, naval operations--while geographically extensive--would not be decisive; and by denigrating the navy's ability to perform its missions independently. Particularly troublesome to naval officers was the first edition's downgrading of the Soviet Navy's role in conducting ASW and strategic strikes on enemy territory.

Sokolovskiy's views on the "proper" role of the navy were well known even before publication of Military Strategy, and Gorshkov's references to authoritative persons who failed to understand the need for a navy in the late 1950s probably refer to Sokolovskiy, who was then chief of the General Staff, as well as to Zhukov and Khrushchev.* Indeed, while still chief of staff, Sokolovskiy reportedly asked Gorshkov how it felt to command an obsolete service.

Subsequently, in face of naval opposition, Sokolovskiy and his colleagues conceded that support of the ground forces no longer was a main naval task (but added that considerable effort still needed to be expended in this area) and acknowledged ASW as the primary determinant of Soviet naval policy.

Further, the relevance of Military Strategy to contemporary military doctrine is open to doubt. Two years before the appearance of the first edition, Sokolovskiy--who had been a close associate and war-time chief of staff of Marshal Zhukov--was replaced as chief of the General Staff. His successor was

* "We had among us, unfortunately, some extremely influential 'authorities' who felt that with the appearance of nuclear weapons the Navy had completely lost its importance as branch of the Armed Forces." Morskoy Sbornik, No. 2, 1967, U. See also Herrick, Soviet Naval Strategy, for a discussion of naval reaction to Military Strategy.

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M. V. Zakharov, a close associate of Marshals Malinovsky, Grechko and Krylov who dominated the Soviet defense establishment into the 1970s. In the late 1960s, Zakharov's deputy for operations, Col. Gen. M. I. Povaliy, told a US military attache that Military Strategy was out of date. Since then, he and Zakharov have both written detailed classified articles to publicize the changes in Soviet doctrine. These articles treat interdiction primarily as a residual mission which could become important late in a war--after the nuclear exchange.

Finally, the inclusion of Defense Minister Ustinov is puzzling. We know of only one pertinent reference by him to interdiction, made in a very large (and particularly sensitive) document. This appeared in a listing of NATO's strengths and weaknesses and merely observed--as have many Soviets--that NATO's dependence on long sea lines of communication is an area in which the West is vulnerable.*

Our View

Taken together, the statements by five officers selected by the Navy indicate that interdiction at sea is a secondary aspect of SLOC interdiction in general, which itself is secondary to the performance of strategic tasks. The evidence is buttressed by statements by other officers and by ~~Soviet~~ shipbuilding programs, weapons loadings, and exercises, all of which point to the priority of countering Western naval strike forces. (See the original SLOC paper for details.) Soviet writings indicate that we should expect some attacks on ports, docks, and staging areas.

This does not mean that the Soviets in wartime would not conduct some attacks on NATO shipping. It does reflect the predominance of tasks of direct significance to their combat operations in Soviet war planning.

* Ustinov also was chairman of the collegium that wrote volume nine of the Soviets' History of World War II, 1939-1945, as was Marshal Grechko for earlier volumes. Volume nine contains two chapters on interdiction operations in 1944, from which one can conclude that the Soviets regard their operations on the sea lanes as then having been successful.

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10. *What is our view of the Navy statement that in a protracted conflict the Soviets would expect a concentrated interdiction effort to force NATO naval forces, including carriers, to protect the sea lanes? (para. 8)*

We believe that they would hope that a minor interdiction effort would accomplish the same ends, while leaving the Northern Fleet's air- and submarine-based defenses of the USSR intact. We do not believe that they would give up those defenses in order to draw NATO's naval strike forces away from the approaches to the USSR.

11. *What is the basis for our assumption that the USSR could not pose a substantial threat to NATO shipping through air attacks? (para. 9)*

The original SLOC paper contains a discussion of this issue, and it will be treated in-depth in a forthcoming OSR study. Navy has misrepresented our position somewhat in its review, however. We are not saying that NATO land-based air defenses would eliminate the threat to the SLOCs posed by the navy's strike aircraft; rather, we believe that the existence of these defenses would force Soviet aircraft to fly less-than-optimum flight profiles, thereby restricting their range capability and preventing them from reaching most of the SLOCs. Further, we assumed that the Soviets would fly over water in order to minimize exposure of their aircraft to land-based air defenses, but this, too, would reduce their combat radius.

12. *What is our view on the likelihood of Soviets obtaining overseas bases for submarine replenishment? Of the vulnerability of such bases in the event of hostilities? (para. 10)*

Soviet acquisition of bases in Africa, in countries where they now seem to have enough influence, and in the Indian Ocean area would offer little improvement over Northern Fleet bases in supporting a campaign to

-16-

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interdict the military resupply of Europe because of their distance from the sea lanes. Moreover, a study of Soviet support ships attempting to operate from equatorial Africa would almost certainly conclude that they would be critically vulnerable to attack. [REDACTED]

13. *What advantage would the Soviets gain by using cruise missiles vice torpedoes against NATO shipping? (para. 10)*

Using cruise missiles in addition to torpedoes would increase the number of weapons the Soviets could expend against merchant ships. Submarines equipped with standoff missiles also could attack from outside a convoy's defenses. We postulated, as did most Navy campaign analyses that we have seen, that the relatively scarce cruise missiles would not be used against merchant shipping. [REDACTED]

With regard to nuclear weapons, Soviet sources generally indicate that they would be reserved for major warships. [REDACTED]

14. *What differences would result in our analysis from assuming that a protracted conventional conflict rather than a nuclear war occurred? (para. 11)*

Our model assumed a protracted (4-month) conventional conflict. [REDACTED]

-17-

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MEMORANDUM

25 January 1979

SUBJECT: Comments on Navy Review of Revised OSR
SLOC Paper

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-18-

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